

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1 -9 and add the following new claims 10 - 17 as follows:

10. (New) An illumination control circuit for driving and controlling a light emission element, said circuit comprising:

a generating device for generating a control signal of DC voltage for setting a brightness of the light emission element;

a driving transistor connected in series with the light emission element and a power supply, for supplying a driving electric power from the power supply to the light emission element in accordance with said control signal, thereby causing the light emission element to emit a light;

a detecting device for detecting a differential voltage between a power source voltage of the power supply and a predetermined reference voltage, dividing the differential voltage with an adjustable coefficient, thereby generating a detection voltage; and

a compensation device connected in series with the light emission element and the driving transistor as well as the power supply, for power-amplifying the detection voltage and generating a compensation voltage which follows the detection voltage, thereby generating a differential voltage between the power source voltage of the power supply and the compensation voltage, between tow ends of the light emission element and the driving transistor,

wherein when there is a change in the power source voltage of the power supply, the compensation device generates a compensation voltage, so as to make a changing

rate of the differential voltage applied between tow ends of the light emission element and the driving transistor, to become smaller than a changing rate of the power source voltage which has involved a change.

11. (New) The illumination control circuit according to claim 10, wherein said detecting device has voltage dividing resistor capable of adjusting said coefficient, divides said differential voltage by virtue of voltage dividing resistor, and generates a divided voltage.

12. (New) The illumination control circuit according to claim 11, wherein said detecting device has an electronic element for generating said reference voltage, said electronic element and voltage dividing resistor are connected in series with respect to the power source voltage of the power supply.

13. (New) The illumination control circuit according to claim 10, wherein the DC voltage of control signal is adjustable.

14. (New) The illumination control circuit according to claim 10,
wherein said compensation device is formed of a transistor which performs a power amplification and generates said compensation voltage in accordance with said detection voltage;

wherein said generating device has a smoothing device for smoothing a duty-adjustable switching signal and generating the control signal of DC voltage.

15. (New) An illumination control circuit for driving and controlling a light emission element, said circuit comprising:

a driving transistor connected in series with said light emission element and a power supply;

a detecting device for detecting a differential voltage between a power source voltage of the power supply and a predetermined reference voltage, and generating a detection voltage formed by adding a voltage divided by dividing said differential voltage with an adjustable coefficient and said reference voltage;

a switching element for switching said detection voltage in accordance with PWM signal for setting a brightness of said light emission element, and outputting a switching signal;

a smoothing device for smoothing said switching signal and generating a control signal of DC voltage; and

a compensation device for controlling said driving transistor in accordance with a DC voltage of the control signal, and causing said power supply to supply a driving voltage proportional to the DC voltage to said light emission element,

wherein when there is a change in the power source of the power supply, the DC voltage of the control signal changes at a changing rate smaller than a changing rate of a changed power source voltage in accordance with said coefficient, thereby inhibiting a driving electric power of said driving transistor on said light emission element in accordance with said coefficient.

16. (New) The illumination control circuit according to claim 15, wherein said detecting device has voltage dividing resistor capable of adjusting said coefficient, divides said differential voltage by virtue of voltage dividing resistor, and generates a divided voltage.

17. (New) The illumination control circuit according to claim 15, wherein the compensation device is a transistor for controlling a control current of the driving transistor in accordance with the DC voltage of the control signal.